

114,558

Application Date : 13th Feb., 1941. No. 388/41.

BEST AVAILABLE COPY

<i>Applicant (Assignee of Actual Inventor) ..</i>	METAL AND MOULDING MANUFACTURERS PTY. LIMITED.
<i>Actual Inventor .. .. .</i>	ERNEST MATE, of New South Wales.
<i>Application and Provisional Specification</i>	Accepted, 6th March, 1941.
<i>Complete Specification after Provisional Specification</i>	Lodged, 8th November, 1941.
<i>Complete Specification .. .. .</i>	Accepted, 16th January, 1942.
<i>Acceptance Advertised (Sec. 50) ..</i>	29th January, 1942.

### Class 06.6:

*Drawing attached.*

### COMPLETE SPECIFICATION.

#### "Improvements relating to electric torches."

We, METAL AND MOULDING MANUFACTURERS PTY. LIMITED, carrying on business as Manufacturers, at 8 St. Peters Street, Darlinghurst, near Sydney, in the State of New South Wales, Commonwealth of Australia, hereby declare this invention and the manner in which it is to be performed, to be fully described and ascertained in and by the following statement:—

10 This invention relates to electric torches of the kind capable of operating at fixed and also at changeable focal points.

The torch consists of a hollow body preferably tubular to receive one or more dry cells for supplying the electric current to a lamp. The body of the torch is capable of being closed at its lower end by a screwed cap which has a spring of usual construction for pressing the dry cells against one of the lamp contacts and for making a connection from the cells to the casing or body which is of metal.

The upper end of the body has an insulated disc like member secured thereto.

This member is screw threaded or otherwise formed to receive an electric lamp or bulb. Preferably the lamp is screwed into a socket in the said member and the latter has a metallic contact adapted to engage a central contact of the lamp and pass through the insulated material of the disc to the inside of the body where it is engaged by the dry cell terminal previously referred to.

The body also has a spring blade switch member secured at its lower end thereto, the said blade having intermediate its length a push piece. At its upper end the said blade is adapted for engaging one limb of a E shaped contact fitting which latter is secured to the insulated disc and has its other limb disposed in the lamp socket in such manner that it makes electrical connection with the lamp when the latter is placed in position.

A second spring blade is also secured to the body and a guiding pin is attached at the upper end of the spring. This resilient pin passes through a hole in the body of

the torch and projects outwardly similarly to the push piece of the spring blade switch member.

There is a head or shoulder formed on the body a short distance from the top thereof upon which a sleeve member is supported.

The sleeve member carries the usual reflector and lens and forms the upper cap 10 of the torch.

The sleeve member is capable of turning and sliding movement upon the top of the torch body and is provided with a focusing guide slot in which the resilient pin is engaged. A second slot termed the switch slot, is also formed in the sleeve and through which the said push piece projects, while at another position on the sleeve a round hole is formed through which the push piece may be alternatively passed.

The invention in one form provides for intermittent flashing at a fixed focus; intermittent flashing at a changeable focus; and continuous illumination with variable focusing.

In a modified form the same functions may be performed except that the means provided for focusing with a continuously closed switch is not provided. The word "continuous" in the above sense does not include a push piece held down by hand.

In order to protect the lamp from shock or damage should the torch be dropped a resilient shock absorber is provided upon the sleeve member and also, if desired upon the body cap.

In order that the invention may be more readily understood reference will now be made to the accompanying drawings wherein:—

Figure 1 is an expanded view of the complete torch showing the upper cap, the body and the lower cap.

Figure 2 is a sectional view of the upper cap showing the reflector, the lens and the rubber shock absorber ring.

Figure 3 is a plan view of the top of the body.

Figure 4 is a part sectional view of the body on the line 4—4 of Figure 3.

Figure 5 is a detail view on the line 5—5 of Figure 3 showing the mounting of the focusing or guiding pin.

Figure 6 is an assembled view of the complete torch showing the focusing pin and the push piece in their normal position.

Figure 7 is a detail view of the upper cap or sleeve member showing the position of the focusing pin and push piece for intermittent lighting and variable focusing.

Figure 8 is a detail view of the upper cap or sleeve member showing the position of the focusing pin and the push piece for focusing with a continuous beam.

The cylindrical metal body 10 which receives the dry cells 11, Figure 4, is closed 10 at its lower end by a screwed cap 12 of usual construction and is also closed at its upper end by a disc 13 of insulating material. This disc 13 receives an electric lamp 34. As illustrated a screw threaded 15 socket 14 is provided for this purpose. The disc 13 has formed therewith a central contact 15 which is adapted to engage the central dry cell terminal 16 and provide a centre contact for the lamp 34 when 20 screwed into the threaded socket 14. With this screw socket type of lamp the thread portion thereof forms one terminal; and to connect with this screwed portion a second lamp terminal is provided in the 25 form of a U-shaped fitting 17 which is secured to the disc 13 by a rivet 35. One limb 36 of the U-shaped fitting 17 engages the lamp 34 while the other limb 38 is adapted to be engaged by a spring blade 30 switch member 18 which is secured at one end to the body 10 by rivets 19, this said end of the spring member 18 being bent to form a resilient spacer 20 for the dry cell 11, see Figure 4.

The switch member 18 has a push piece 21 and when pressed inwards engages the limb 36 of fitting 17. The return circuit for the lamp is from the casing 10 through the usual spring 37 in cap 12 to the base of the 40 lower dry cell 11 in well known manner.

A second spring blade 22 is secured to the body 10, see Figures 1 and 5, and carries the focusing and guiding pin 23. Both the pin 23 and the push piece 21 pass through 45 holes or slots in the body 10 to be explained later.

The pin 23 is normally disposed in the transverse portion 24 of a guiding or focusing slot formed in a sleeve member 25, see 50 Figures 1, 2 and 6 and the push piece 21 is normally disposed in a hole 26 also formed in the said sleeve member 25.

The sleeve member 25 which is capable of turning and sliding movement upon the 55 body 10 and which normally rests upon a

head 27 carries a reflector 28, Figure 2, which together with lens 29 is retained in position by an annular shock absorber 30 of resilient material. It will be observed that as illustrated in Figures 1, 6 and 7 the sleeve member 25 has two diagonal focusing slot portions 31 and 32 extending from the transverse guiding or focusing slot portion 24 and that in addition to the hole 26 for the push piece 21 there is a diagonal slot 33 in which the said push piece 21 may move.

When the sleeve member 25 is placed upon the body 10, see Figure 6, the focusing pin 23 is depressed and finally enters the transverse slot 24; while at the same time the push piece 21 is depressed and finally enters hole 26. This position, Figure 6, may be said to be the normal position of the sleeve member 25 with relation to the body 10 of the torch. In this position the push piece 21 may be pressed to close the circuit of the lamp 34 through spring blade 18 and contact limb 36.

If now it is desired to change the focus of the beam projected from the torch while having manual control of the push piece 21 the sleeve member 24 is turned to the right, Figure 1, so as to assume the position Figure 7 and cause the focusing pin 23 to enter the diagonal slot 31 and the push piece 21 to enter the diagonal slot 33. This may easily be effected as the push piece 21 has a spherical head which enables it to be depressed while it passes from hole 26 to diagonal slot 33. In this Figure 7 position, according to the degree of movement of the sleeve 25, focusing may be achieved and at the same time the push piece 21 is free to be depressed at will to close a circuit for producing a beam of light.

If it is desired to use a continuous beam without having to manually press the push piece 21 the sleeve 25 is turned so that the push piece 21 is disposed beneath that portion of the said sleeve 25 between the hole 26 and the diagonal slot 33. In this position of adjustment the beam is not capable of being focused. However, if the sleeve 25 is turned to the left of Figure 1, so as to assume the position, Figure 8, the focusing pin 23 enters the diagonal slot 32 and the push piece 21 passes beneath the sleeve 25 and is kept depressed to close the lamp circuit at contact limb 36. As seen

in Figure 8 the extreme limit of focusing under these conditions has been attained.

It will be appreciated that various modifications may be made in the above construction without departing from the spirit of the invention, as defined by the appended claims.

Having now fully described and ascertained our said invention and the manner in which it is to be performed, we declare that what we claim is:—

1. Improvements in electric torches, comprising a cylindrical body for receiving dry cells, said body having a screwed cap, a disc of insulating material secured to the body for receiving an electric lamp, said disc also having electrical contacts for the lamp, one of said contacts being capable of engagement by a switch blade member depressible by a push piece, a sleeve member capable of turning and sliding upon the body and having a hole to receive the said push piece, said body also having a resilient pin for engaging a guiding slot in the said sleeve member for the purpose of controlling the turning and sliding movement of the sleeve with relation to the body.

2. Improvements in torches as claimed in Claim 1, characterised in that the electrical contacts for the lamp consists of a central contact which engages both the lamp and the dry cell battery and a U-shaped fitting one limb of which engages the lamp while the other limb is capable of being engaged by the switch blade member.

3. Improvements in torches as claimed in Claim 1, characterised in that the said slot in the sleeve has a horizontal portion and one or more diagonal portions in which the said resilient pin may move when the sleeve is turned with respect to the said body.

4. Improvements in torches as claimed in Claim 3, further characterised in that the diagonal portion or portions of the said slot in conjunction with the resilient pin provide for focusing of the beam from the torch.

5. Improvements in torches as claimed in Claims 1 and 3, characterised in that the said push piece is also capable of engaging a diagonal slot in the sleeve member when the resilient guiding pin enters a diagonal portion of the said slot with which it is engaged.

6. Improvements in electric torches as claimed in Claim 1, characterised in that

the sleeve member has a reflector and a lens held in position by an annular shock absorber of resilient material.

7. Improvements in electric torches  
 5 having a body and a movable sleeve member carrying a reflector and a lens characterised in that the body has a resilient guide pin and a contact making push piece, said guide pin functioning to guide the sleeve with  
 10 respect to the body and also serving to focus the beam from the torch, said push piece being capable of manual depression at a fixed focal point, and also of being depressed manually at variable focal points.  
 15 said push piece being further capable of

7

being automatically depressed to give a continuous beam at a fixed focal point or alternatively at variable focal points.

8. An improved electric torch substantially as described and as illustrated in the 5 accompanying drawings.

Dated this 7th day of November, 1911.

METAL AND MOULDING MANUFACTURERS  
 PTY LIMITED,

By its Patent Attorneys,

10

EDWARD WATSON & SONS,

Fellows Institute of Patent Attorneys  
 of Australia.

Witness—J. E. Wells.

8

Printed and Published for the DEPARTMENT OF PATENTS, COMMONWEALTH OF AUSTRALIA,  
 By L. F. JOHNSTON, Commonwealth Government Printer, Canberra.

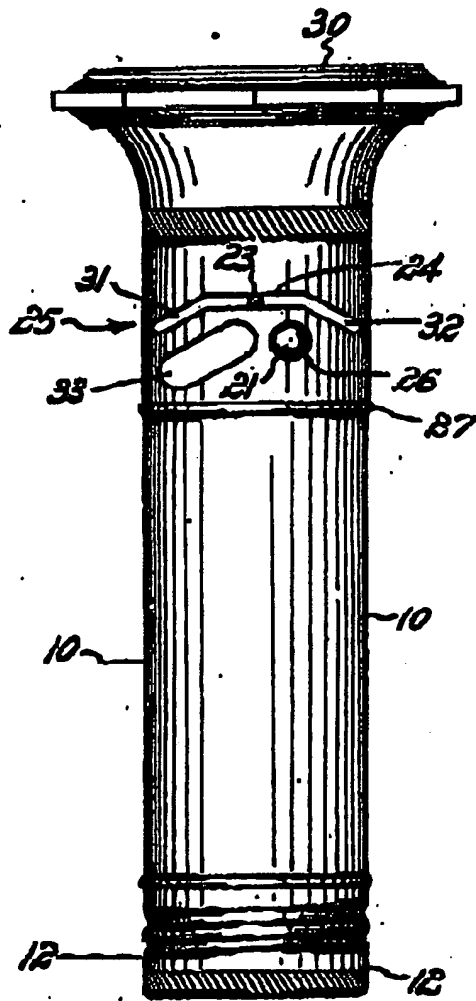


Fig. 6.

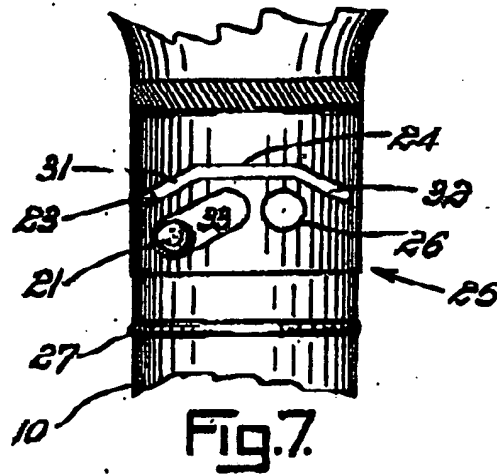


Fig. 7.

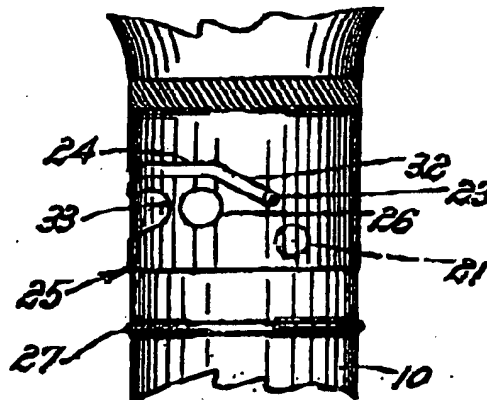
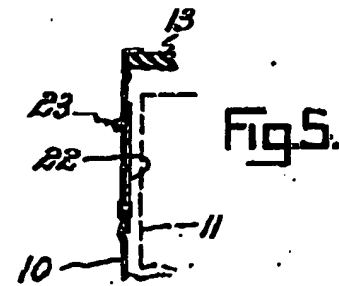
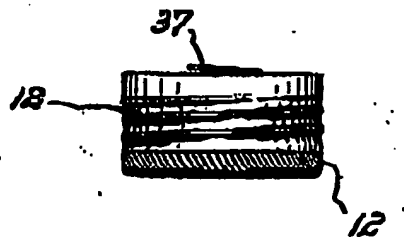
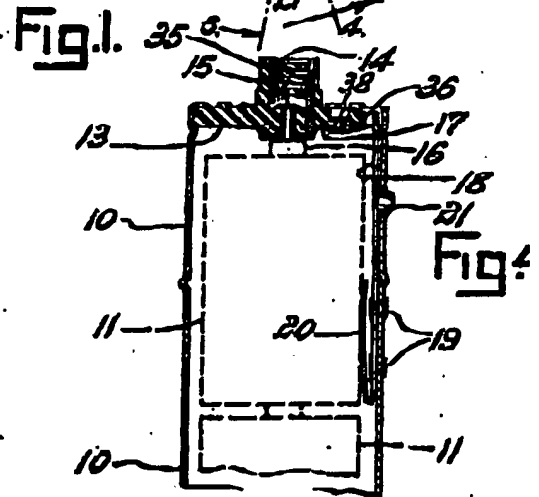
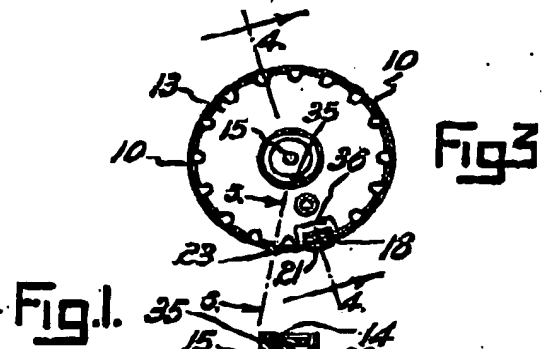
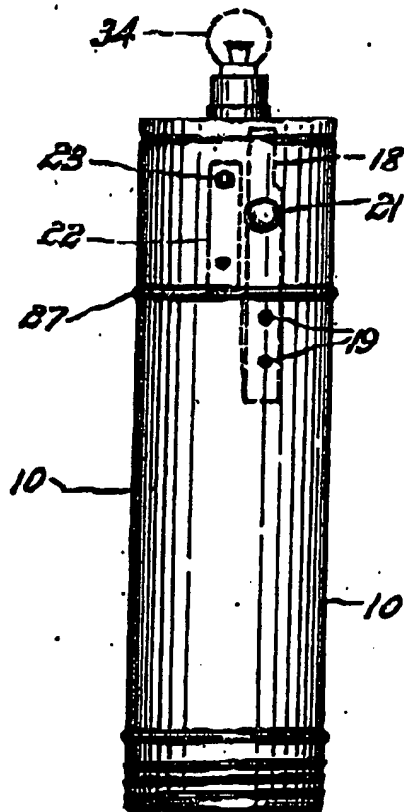
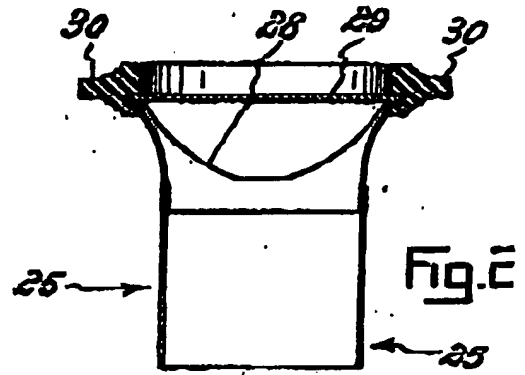
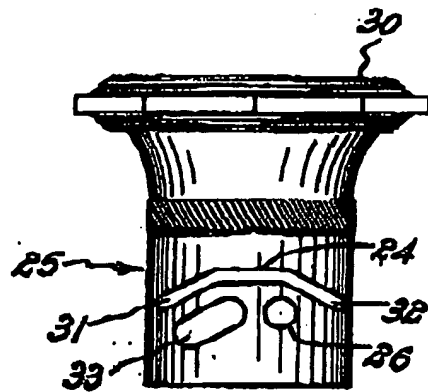


Fig. 8.



**This Page is Inserted by IFW Indexing and Scanning  
Operations and is not part of the Official Record**

**BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** \_\_\_\_\_

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.**